



DA-7X2 Codeplug Basics

A beginner-safe route from radio ID to channels, zones, scan lists, write, and read-back

What a codeplug lets you do: A codeplug is your radio's saved operating plan. This guide helps you organize channels, zones, contacts, and scan lists into a configuration you can back up, restore, and trust.

Start with the radio: Connect the DA-7X2, choose Program > Read From Radio, and save an untouched .rdt backup. Build your working codeplug from that read so the radio's model, band, and hardware settings are preserved.

What the pieces mean

Item	Purpose
Radio ID	Identifies your station or system identity on DMR
Talkgroup / contact	Names the DMR group or private destination used by a channel
Channel	Combines frequency, mode, signaling, and the transmit destination
Zone	Organizes channels into a list you can select on the radio
Receive group	Allows selected additional talkgroups to be heard on a DMR channel
Scan list	Defines the channels monitored when scan is started
Digital Contact List	Separate caller-ID database used to display names and locations for received DMR IDs

Supported organization

Area	DA-7X2 capacity / rule
Channels	4,000 analog and digital channels
Zones	250 zones; up to 160 channels per zone
Talkgroups	10,000
Digital contacts	Up to 500,000 caller-ID records
Scan lists	250 lists; firmware V1.05d2 supports up to 50 channels per list and lets multiple lists be linked

1. Create the DMR identity and destinations

1. In the DMR section of CPS, open Radio ID List and enter the authorized DMR ID and a clear name. Select the correct default ID where required.
2. Open Talk Groups and create only the group and private-call destinations you need. Enter the exact TG/DMR ID and select the correct call type.

3. Create a receive group only when the channel should hear additional talkgroups on the same frequency, color code, and time slot. Use None when that broader receive behavior is not intended.

Use the system plan: Obtain repeater frequencies, color codes, time slots, talkgroups, and access rules from the repeater or system owner. Do not copy another region's values because they look similar.

2. Create channels

Analog channel	DMR channel
Receive and transmit frequencies	Receive and transmit frequencies
Bandwidth required by the system	Color Code
CTCSS/DCS encode and decode, if used	Slot 1 or Slot 2
Transmit power and permit rules	Talkgroup/contact and Radio ID
Optional signaling only when required	DMR Mode and TX Permit required by the system

1. Open Common Settings > Channel and create one channel for each distinct analog path or DMR talkgroup/slot combination.
2. Use a short, consistent channel name that remains readable on the radio.
3. For every transmit-capable channel, confirm the frequency, signaling, power, and permission against the authorized system plan.
4. Save the working .rdt file before moving to zones.

3. Put channels in zones

1. Open Common Settings > Zone and create purpose-based zones such as Local DMR, Local Analog, Travel, or Event Receive.
2. Add the required channels in the order you want to reach them from the radio.
3. Choose the initial A/Main and B/Sub channels when those fields are available.
4. Keep frequently used zones near the top. A channel must be in a zone to be selected in normal channel mode.

4. Build scan lists only when needed

1. Open Common Settings > Scan List and create a list with a clear purpose.
2. Add up to 50 channels to the individual list and set priority/revert behavior intentionally.
3. Assign the scan list or linked scan lists to the channel that should launch the workflow.
4. Test scan in Channel mode; conventional scan lists are not active in VFO mode.

5. Write, read back, and test

1. Save the reviewed working codeplug under a new dated filename.
2. Choose Program > Write To Radio and write the main codeplug data. Do not disconnect or power off during the write.
3. Power-cycle the radio, then choose Program > Read From Radio and save a dated read-back file.
4. Compare representative radio IDs, contacts, channels, zones, scan lists, and Optional Settings with the working file.
5. Perform a local, authorized, low-power receive and transmit test. Verify the displayed contact and transmit channel before PTT.

Common first-codeplug problems

Problem	Most likely check
Channel exists in CPS but not on radio	Add it to a zone and write/read back again
Repeater does not respond	RX/TX frequency, Color Code, Slot, contact, TX Permit, and system access rules
Can transmit but hear the wrong groups	Receive Group and Digital Monitor settings
Scan will not start	Channel mode, scan-list assignment, and list membership
Names do not appear for callers	Import and write the separate Digital Contact List
VFO or feature menus are missing	Use the DA-7X2 Initial Setup Guide